Utah Department of Health

News Release

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Can Genomics Explain Asthma Disparities?

New data reveal differences in asthma rates across Utah

(Salt Lake City, UT) – If you've ever thought there seem to be a lot of children and adults with asthma in your neighborhood, you may be right. New data from the Utah Department of Health (UDOH) show there are big differences in the rates of the disease from city to city, and even neighborhood to neighborhood in Utah.

The differences have led health experts to question whether genomics – the interaction between genes and the environment – may be at play. "Historically, asthma has been considered an environmental disease triggered by factors like air quality, dust mites, and tobacco," said Libbey Chuy of the UDOH Asthma Program. "But with recent advances in genetics, it is becoming clear that asthma is caused by an interaction between both the environment and a person's genetic makeup."

Asthma data collected from 2003-2006 by the UDOH show several areas (neighborhoods or regions) with higher or lower reported asthma rates than the state average of 8.5%. The five areas with the highest rates among youth aged 0-17 are:

- South Ogden (12.9%)
- Riverdale (15.8%)
- Downtown Salt Lake (13.0%)
- Woods Cross/North Salt Lake (add 16.2%)
- Glendale (13.1%)

Source: *Utah Health Status Survey*

Karen Smith lives in North Salt Lake and believes the nearby refineries and processing plants have worsened her son's asthma.

"My son returned to live with me in October 2006 and by November he was wheezing and coughing, enough so that I took him to a specialist," said Smith. "I also called the

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management of our mobile home community and asked them to help clean up some of my environmental concerns," Smith added.

Utah areas with the lowest reported prevalence of child asthma cases are:

- Bountiful (3.1%)
- Provo South (3.6%)
- Utah County South (4.0%)
- Lehi/Cedar Valley (4.2%)
- North Orem (4.6%)

Source: *Utah Health Status Survey*

Alissa Walker of Utah County wasn't surprised when her nearly two-year-old daughter was diagnosed with asthma. "My mother-in-law and my husband's grandmother both have asthma - it just runs in our family," Walker said.

What is the difference between the Smiths and the Walkers? Why does it appear some individuals are predisposed to the disease and others are not? Exactly which environmental factors influence those living in these areas?

These and other questions are being discussed by health professionals across the state. On Thursday, June 7, 2007, the Utah Asthma Task Force will host the 2nd Annual Asthma Genomics Conference to discuss how genomics will impact the management of asthma in the future. The conference is free and open to the public, but online registration is required. To register, visit: http://www.health.utah.gov/asthma/genomicsworkshop.html. For more information on asthma, go to www.health.utah.gov/asthma.

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